

DERWENT-ACC-NO: 1986-175473

DERWENT-WEEK: 198627

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TITLE: H.V. semiconductor module for rectifiers has  
intermediate heat exchanger comprising easily boiling  
dielectric liquid with ribs or evaporation and  
condensation parts

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PRIORITY-DATA: 1984SU-3707495 (March 5, 1984)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE
SU 1195397 A	November 30, 1985	RU

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO
SU 1195397A	N/A	1984SU-3707495
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INT-CL-CURRENT:

TYPE	IPC	DATE
CIPS	H01L23/34	20060101
CIPS	H05K7/20	20060101

ABSTRACTED-PUB-NO: SU 1195397 A

BASIC-ABSTRACT:

The module has its working reliability improved by eliminating the current leakage along the cooling water and its utilisation capability extended by increasing the upper limit of the operational voltage.

The module consists of the power semiconductor device (1) with current conducting bars (2), water cooler (3) and intermediate heat exchanger

(4)  
comprising easily boiling dielectric liquid (5) e.g. freon. The heat  
exchanger  
(4) has ribs for evaporation (6) and condensation (7) areas, which  
are  
separated by a dielectric-ceramic frame (8) and liquid (5), or a  
ceramic frame  
(8) with a dielectric washer.

The heat produced in the device (1) is transferred to the liquid (5),  
which  
boils in the evaporation area (6). The liquid (5) vapour is  
condensed in the  
area (7) passing heat to the flowing water via the separation wall.  
The  
condensate returns back to the evaporation area (6).

USE - HV rectifying and converting systems. Bul.44/30.11.85.

TITLE-TERMS: SEMICONDUCTOR MODULE RECTIFY INTERMEDIATE HEAT EXCHANGE  
COMPRISE

EASY BOILING DIELECTRIC LIQUID RIB EVAPORATION  
CONDENSATION PART

DERWENT-CLASS: U11 V04 X12

EPI-CODES: U11-D02; V04-T02A; V04-T03A; X12-J01X;

SECONDARY-ACC-NO:

Non-CPI Secondary Accession Numbers: 1986-131074